matter.

## REMARKS

Applicants' undersigned attorney thanks the Examiner for a kind and thorough review of the Application. A substitute power of attorney is enclosed, providing the undersigned attorney with authority to prosecute this Application. As the Examiner correctly noted, a provisional election was made without traverse to initially prosecute the invention of Group I (e.g., claims 1-5 and 10-12). Applicants' undersigned attorney hereby affirms this election and has accordingly cancelled pending claims 6-9. This election was made without waiving any right to file subsequent divisional and/or continuation applications directed to and/or related to the unelected claim group II.

The Examiner has objected to the pending Application and has stated that "it is unclear what subject matter from the '698 patent is being referred to on page 5, lines 14 - 17." Specifically, the Examiner has objected to the statement "[t]he needles 64 of the bearing 60 rotate at 62 on the bearing surface 74 as an inner race in a manner similar to that described in the '698 patent." This objection was made on the basis that "the '698 patent does not have an inner race." Applicants' undersigned attorney respectfully asserts that the '698 patent *does* describe an inner race and that this objection should be accordingly withdrawn.

For example and without limitation, at column 3, lines 31 - 46, the '698 patent describes the function and structure of an inner race 26. Specifically, the '698 patent states: "[e]ach roller includes an inner bearing surface or race 26 (Fig. 5) which is generally cylindrical . . . the needles bear against **the inner race 26** of the roller and support the roller for rotation about the axis of the trunnion." (Emphasis added). As explained within the pending Application, the needles 64 of the present invention rotate on bearing surface 74 in a manner similar to that

described within the '698 patent (e.g., they cooperate with the inner race or bearing surface 74 to "support the roller for rotation about the axis of the trunnion"). Hence, lines 14 - 17 of page 5 of the pending Application refer to a structure and function which is indeed disclosed and described within the '698 patent. For these reasons, Applicants' undersigned attorney respectfully asserts that lines 14 - 17 of page 5 of the pending Application are clear and unambiguous and respectfully requests that the Examiner's objection be withdrawn.

The Examiner rejected claim 3 under 35 U.S.C. §112, first paragraph, on the basis that "[t]he specification does not include a means for angularly retaining the bearing on the trunnion." Applicants' undersigned attorney respectfully asserts that a means for angularly retaining the bearing on the trunion is disclosed within the pending Application and that this rejection should be accordingly withdrawn.

Particularly, on lines 3 - 13 of page 2 of the pending Application, a "prior art" assembly which is shown Figure 2 is described. The pending Application states that the "prior art" assembly of Figure 2 "includes a means for displacing the bearing assembly relative to the trunion," and the "displacement comprises an angular movement of the trunion relative to the inner race of the bearing assembly." (Emphasis added). Hence, the claimed "means for angularly retaining the bearing on the trunion" is illustrated in Figure 2 and is described in lines 3 - 13 of page 2 of the pending Application. The use of this "means" within Applicants' invention is also further described within the pending Application.

For example, lines 3 - 5 of page 5 of the pending Application state that the novel tripod bearing assembly "accommodates any angular deflection of the joint . . ." (Emphasis added). It should therefore be appreciated by one of ordinary skill in the art that one such non-limiting way of allowing and/or causing the bearing assembly to angularly deflect in the described manner is

to angularly retain the bearing assembly on the trunion in the manner shown in Figure 2 and described within lines 3 - 13 of page 2 of the pending Application. For these reasons, Applicants' undersigned attorney respectfully requests that the Examiner withdraw this objection.

Claim 3 was further rejected on the basis of 35 U.S.C. § 112, paragraph 2, "as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention." Applicants' undersigned attorney has appropriately amended pending claim 3 in order to more fully clarify Applicants' invention in accordance with the Examiner's comments. Specifically, the term "the bearing" was amended to "the bearing assembly" thereby giving proper antecedent basis to the term "bearing assembly" (e.g., the term "bearing assembly is used in claim 2 from which claim 3 depends).

***35 U.S.C. §102***

Claim 1 was rejected under 35 U.S.C. § 102 (b) as being unpatentable over U.S. Patent Number 5,505,660 of Van Dest (hereinafter referred to as "Van Dest"), and claims 2-5 and 10-12 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over Van Dest. Specifically, the Examiner asserted that claim 1 of the present invention was anticipated by Van Dest which discloses:

> "a tripod joint with a spider 14 with three trunnions 16, a bearing assembly 34 is mounted on the trunnion and includes an inner race 18, an outer race 38 and a plurality of needles 32 between the inner and outer races 18, 38. An elastic ring 28 axially retains the bearing assembly on the trunnion. The curved surface on the bottom of the trunnion 16 is a means for annularly retaining the bearing assembly on the trunnion since it would prevent the bearing assembly from pivoting on the trunnion. The inner race is in the form of a formed cup."

For a prior art reference to anticipate under §102 (b), it must disclose *every element* of the claimed invention. Van Dest fails to meet this standard as it does not disclose (or make obvious) all of the elements of the pending claim 1.

Particularly, claim 1 includes, *inter alia*, "a bearing assembly press fit onto the trunion . . ." (Emphasis added). This novel element is not found in Van Dest, as the Van Dest bearing assembly is **intentionally not adapted to be press fit onto the trunnion**. As described in column 3, lines 10 - 19 of Van Dest, the inner race or "articulation element 18" is "mounted to revolve on the journal 16 about the axis Y-Y." (*See also* Figure 1 of Van Dest). Thus, Van Dest does **not** disclose or make obvious a bearing which is press fit to the trunion. Rather, Van Dest discloses a bearing assembly which is mounted to a trunion in a manner which specifically and intentionally allows the inner race of the bearing assembly to "revolve" or move with respect to the trunion or journal 16. This required ability of the inner race to revolve upon the journal is an important design element of the Van Dest bearing assembly since, as explained on lines 48 - 56 of column 1 of Van Dest, a specific object of the Van Dest invention is to provide a tripod "whose articulation elements are . . . mounted to swivel on the tripod." (Emphasis added).

Applicants' bearing assembly is adapted to be "press fit" to the trunion, in order to specifically and intentionally prevent the inner race from revolving or swiveling upon the trunion. (*See* the pending Application at page 5, lines 7, 9, which states "The engagement of this cylindrical trunion with the inner surface 44 of the bearing prevents angular displacement therebetween.") (Emphasis added). The novel press fit mounting arrangement, required by pending claim 1, provides significant advantages and benefits over the Van Dest assembly. These provided benefits and advantages emanate from the creation of a bearing assembly which is specifically and intentionally adapted to be prevented from or incapable of swiveling on the tripod.

For example and without limitation, as described on page 4 of the pending Application, "[t]he press fit of the bearing to the trunion and the inner race 42 **eliminate the need for**

**machining** (such as turning or grinding) of the outer diameter of the trunion 20 since it is not a bearing surface. . . ." (Emphasis added). As further explained within the pending Application, the press fit mounting further allows the bearing assembly to "be shipped as a modular unit and pressed fit onto the trunion 14 in a simple manner, without the need to handle loose needles at the tripod assembly source. " Moreover, unlike the Van Dest assembly, Applicants' "press fit" mounting "also aids in axially retaining the bearing 40 to the trunion 20." (Application at page 4, lines 29-30). In contrast to Applicants' invention, Van Dest requires the trunnion to be machined in order to allow the inner race or journal 16 to freely revolve around the trunnion and lacks all of the desired benefits which are provided by Applicants' "press fit" arrangement.

In sum, Applicants' claimed bearing assembly (i.e., a bearing assembly which is press fit to the trunion), is not found, disclosed, or even suggested in Van Dest, and operates in a manner completely different from and contradictory to the teachings of Van Dest. Importantly, the differences between Applicants' claimed invention (e.g., a press fit type mounting) and Van Dest are the very attributes / characteristics which provide the previously delineated benefits of Applicants' invention. Hence, the claimed differences create these important distinguishing features between Applicants' claimed invention and Van Dest. Since the Van Dest assembly is specifically designed to avoid such a "press fit" bearing assembly, it is respectfully asserted that Van Dest cannot anticipate (or make obvious) Applicants' pending claim 1. For these reasons, allowance of claim 1 is respectfully requested.

***35 U.S.C. §103(a)***

Claims 2 - 5 which depend on claim 1, independent claim 10, and claims 11 - 12 which depend on claim 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Van Dest. The Examiner has stated that:

> "Van Dest does not teach a non-machined outer surface on the trunnion. A non-machined surface would be rougher and therefore there would [be] increased friction between the trunnion and the inner race which would prevent relative movement between the trunnion and the inner race. It would have been obvious for one of ordinary skill at the time of the invention was made to not machine the outer surface of the trunnion so to increase the friction between trunnion and the inner race so to prevent relative movement between the trunnion and the inner race."

Independent claim 10 requires, *inter alia,* a "non-machined trunion" and a "bearing assembly press-fit onto the trunion" (claims 2-5 also require a trunion "having a non-machined outer surface for press-fit engagement with the inner race of the bearing assembly"). The non-machined trunion and the "press fit" mounting of the bearing assembly, required by claims 2-5 and 10-12, are non-obvious improvements over Van Dest and all of the other prior art of record, and provide unique advantages which are not suggested or made obvious by Van Dest or the other prior art of record. The claimed structure is different from the Van Dest assembly since the claimed structure provides for and requires a "press fitted" bearing assembly. The "press fitted" arrangement "eliminates the need for machining (such as turning or grinding) of the outer diameter 30 of the trunion . . . Thus, the trunion may be assembled 'as formed' without finish machining in this embodiment." The press fit "also aides in axially retaining the bearing 40 to the trunion." As further explained within the Application, the press fit mounting further allows the bearing assembly to "be shipped as a modular unit and pressed fit onto the trunion 14 in a simple manner, without the need to handle loose needles at the tripod assembly source." (Application at page 5, lines 20-23).

Furthermore, like the prior art assemblies described on pages 1 and 2 of the Application, the teachings of Van Dest intentionally do not employ a "non-machined" outer trunion surface and a "press fit" mating between the inner race and the trunion, such as those described and required by the claimed invention. Specifically, Van Dest does not disclose or teach the use of a

means to secure the inner race upon the trunion in order to prevent rotation or angular movement, as does Applicant. Rather, the trunion in Van Dest and the other prior art of record intentionally and "rotationally receives" the inner race (i.e., the articulation element 18), thereby allowing the inner race to "revolve on the journal 16 [i.e., trunion]." (*See* Van Dest at column 3, lines 4 - 15). This angular movement of the inner race upon the journal is an important design element of the Van Dest bearing assembly since, as explained on lines 48 - 56 of column 1 of Van Dest, a specific object of the invention is to provide a tripod "whose articulation elements are . . . mounted to swivel on the tripod." (Emphasis added). As the Application states on page 5, lines 7, 9, the engagement of the rough non-machined trunion surface with the inner surface of the bearing "prevents angular displacement therebetween."

**Thus, the trunions disclosed in Van Dest could not include a non-machined surface and press fit engagement of the bearings as described and required in the claimed invention, since such an arrangement would prevent the trunion or journal 16 from "rotationally receiving" the inner race or "articulation element 18", and would therefore prevent the inner race or "articulation element 18" from "revolving" on the trunion or journal 16, as required by Van Dest.** Therefore, one of ordinary skill in the art would not have the motivation or desire to apply the teachings of Van Dest to Applicants' invention or to the objectives/goals to which Applicants' claimed invention is directed.

Dependent claims 3, 4, 5, 11 and 12 are further independently patentable over Van Dest. For example and without limitation, claims 3 - 5 include the additional limitation that the assembly include a "means for angularly retaining the bearing to the trunion." This combination (e.g., a press fit and angularly retained and mounted bearing) is not disclosed, suggested or taught by Van Dest. The angular retention of the bearing assembly upon the trunion in

combination with the press fit mounting arrangement allows the claimed tripod assembly to accommodate "any angular deflection of the joint or relative axial movement," as explained on lines 3 - 5 of page 5 of Applicants' specification. Hence, claims 3 - 5 are independently allowable over Van Dest.

Claims 4, 5, 11 and 12 further include the limitation that the inner race comprises a "formed cup". Van Dest does not teach the use of a "formed cup" type of inner race. Rather, the inner race of Van Dest is "machined" rather than formed, since the inner race of Van Dest is required to have relatively precise dimensions and a machined or "smoothened" surface in order for it to be able to "revolve" on the journal 16 (e.g., the diameter of the hole 24 in the inner race or element 18 "substantially corresponds to the outside diameter of the cylindrical journal 16," Van Dest at column 3, lines 12 - 13). These precise dimensions cannot be achieved by the use of the required "formed cup" of type inner race, but rather requires the use of a "machined" highly precise component. Therefore, the use of a "formed cup" as an inner bearing race is not taught or suggested by Van Dest and, in fact, is contradictory to the teachings of Van Dest.

In contrast to Van Dest, Applicants' bearing assembly includes a "non-machined trunion surface" and a non-rotational or "press fit" engagement of the inner race 42 upon trunion 20, thereby allowing the inner race 42 to comprise a formed cup. That is, a formed cup can be used as an inner race in Applicants' invention since there is no requirement that the race be adapted to revolve around the trunion. For these reasons, the additional limitation of the inner race comprising a formed cup renders claims 4, 5, 11 and 12 independently non-obvious over and patentably distinct from Van Dest.

For all of these reasons, the claimed tripod bearing assembly having a non-machined surface and which is adapted for a press fit engagement with the trunion is a nonobvious

improvement over Van Dest and the other prior art of record.

For all of the above reasons, Applicants respectfully request that claims 1 - 5 and 10 - 12 be allowed. If the Examiner has any further questions regarding this matter, he is invited to call Applicants' undersigned attorney at (248) 865-9588.

Respectfully submitted,

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**CERTIFICATION UNDER 37 C.F.R. 1.8**

I hereby certify that the foregoing First Amendment and Response and petition for one month extension of time being deposited with the United States Postal Service in an envelope as First Class Mail addressed to the Commissioner for Patents and Trademarks, Washington, DC 20231 on this 26th day of August 1999.

By: _____
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**CERTIFICATE OF MAILING UNDER 37 C.F.R. 1.8**

I hereby certify that the foregoing Associate Power of Attorney is being deposited with the United States Postal Service in an envelope as First Class Mail addressed to the Commissioner for Patents and Trademarks, Washington, DC 20231 on this 26th day of August 1999.

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